

CLAIMS

1. A citrus juice composition comprising citrus juice and a tocopherol composition of at least one tocopherol other than alpha-tocopherol.
2. The citrus juice composition of Claim 1 wherein said tocopherol composition is in a range of from about 40 ppm to about 1300 ppm of the citrus juice composition.
3. The citrus juice composition of Claim 2 wherein said tocopherol composition is in a range from about 50 ppm to about 500 ppm of the citrus juice composition.
4. The citrus juice composition of Claim 3 wherein said tocopherol composition is in a range from about 100 ppm to about 200 ppm of the citrus juice composition.
5. The citrus juice composition of Claim 1 wherein said at least one tocopherol is selected from the group consisting of beta-tocopherol, gamma-tocopherol, delta-tocopherol, and combinations thereof.
6. The citrus juice composition of Claim 1 wherein said tocopherol composition comprises from 0 weight percent to 20 weight percent of alpha-tocopherol.
7. The citrus juice composition of Claim 5 wherein said tocopherol composition had been added to the juice composition while the tocopherol composition was in liquid form.
8. The citrus juice composition of Claim 1 wherein said tocopherol composition comprises approximately 14 weight percent d-alpha-tocopherol, approximately 2 weight percent d-

beta-tocopherol, approximately 60 weight percent d-gamma-tocopherol and approximately 24 weight percent d-delta-tocopherol, all based on the total weight of tocopherol composition.

9. The citrus juice composition of Claim 1 wherein said tocopherol composition also includes an edible oil.

10. The citrus juice composition of Claim 9 wherein said edible oil is selected from the group consisting of soybean oil, corn oil, canola oil, safflower oil, sunflower oil, and combinations thereof.

11. The citrus juice composition of Claim 9 wherein said tocopherol composition and edible oil comprises between about 20 and about 80 weight percent of edible oil.

12. The citrus juice composition of Claim 1 wherein said tocopherols comprise no more than 20 weight percent alpha-tocopherols, based on the total weight of the tocopherols.

13. The citrus juice composition of Claim 1 wherein said juice is selected from the group consisting of orange juice, grapefruit juice, lemon juice, tangerine juice, and combinations thereof.

14. The citrus juice composition of Claim 1 wherein said juice is not from concentrate orange juice.

15. The citrus juice composition of Claim 1 wherein said juice is from concentrate orange juice.

16. The citrus juice composition of Claim 1 wherein said juice composition includes at least about 40 weight percent

citrus juice, based on the total weight of the juice composition.

17. A citrus juice composition comprising:

citrus juice;

a tocopherol composition of at least one tocopherol other than alpha-tocopherol, wherein said tocopherol composition is in a range of from about 40 ppm to about 1300 ppm of the citrus juice composition; and

when alpha-tocopherol is present in the tocopherol composition, said alpha-tocopherol is at no greater than about 20 weight percent of said tocopherol composition.

18. The citrus juice composition of Claim 17 wherein said tocopherol composition is in a range from about 50 ppm to about 500 ppm of the citrus juice composition.

19. The citrus juice composition of Claim 17 wherein said tocopherol composition is in a range from about 100 ppm to about 200 ppm of the citrus juice composition.

20. The citrus juice composition of Claim 17 wherein said at least one tocopherol is selected from the group consisting of beta-tocopherol, gamma-tocopherol, delta-tocopherol, and combinations thereof.

21. The citrus juice composition of Claim 17 wherein said juice is at least one juice selected from the group consisting of orange juice, grapefruit juice, lemon juice, tangerine juice, and combinations thereof.

22. A citrus juice composition comprising:

citrus juice;

water;

a tocopherol additive in an amount of between about 40 ppm and about 1300 ppm of the citrus juice composition, wherein said tocopherol additive includes at least one tocopherol other than alpha-tocopherol; and

when alpha-tocopherol is present, said alpha-tocopherol comprises not more than about 20 weight percent of the tocopherol additive.

23. The citrus juice composition of Claim 22 wherein said tocopherol additive comprises mixed tocopherols.

24. The citrus juice composition of Claim 22 wherein said tocopherol additive is added at a range of from about 50 ppm to about 500 ppm of the citrus juice composition.

25. The citrus juice composition of Claim 22 wherein said tocopherol additive is added at a range of from about 100 ppm to about 200 ppm of the citrus juice composition.

26. The citrus juice composition of Claim 23 wherein said mixed tocopherols comprise approximately 0-20 weight percent d-alpha-tocopherol and one or more tocopherols selected from the group consisting of d-beta-tocopherol, d-gamma-tocopherol and d-delta-tocopherol.

27. The citrus juice composition of Claim 22 wherein said tocopherol additive comprises mixed tocopherols and an edible oil.

28. The citrus juice composition of Claim 22 wherein said citrus juice is at least one juice selected from the group consisting of orange juice, grapefruit juice, lemon juice, tangerine juice, and combinations thereof.

29. The citrus juice of Claim 21 wherein said citrus juice comprises at least about 40 weight percent of the composition, and water comprises at least about 20 weight percent of the composition.

30. A method for maintaining flavor sensory attributes in citrus juice beverages, comprising:

adding a tocopherol composition to a citrus juice beverage to provide an improved citrus juice beverage;

wherein said tocopherol composition includes at least one tocopherol other than alpha-tocopherol; and

wherein said tocopherol composition is in a range of from about 40 ppm to about 1300 ppm of the citrus juice.

31. The method of claim 30, further including storing said improved citrus juice beverage for at least four weeks of storage time and maintaining selected flavor sensory attributes in the citrus juice during the storage time.

32. The method claim of Claim 30 further including pasteurizing said citrus juice beverage after adding said tocopherol composition.

33. The method of Claim 30 further including pasteurizing said citrus juice beverage prior to adding said tocopherol composition.

34. The method of Claim 30 wherein said adding of tocopherol composition includes adding said tocopherol composition in liquid form.

35. The method of Claim 30 further comprising premixing said tocopherol composition with a citrus oil to provide a mixture and then adding said mixture to said citrus juice beverage.

36. The method of Claim 30 wherein said tocopherol composition includes approximately 0-14 weight percent d-alpha-tocopherol and at least one tocopherol selected from the group consisting of d-beta-tocopherol, d-gamma-tocopherol and d-delta-tocopherol.

37. The method of Claim 30 wherein said tocopherol composition also includes an edible oil selected from the group consisting of soybean oil, corn oil, canola oil, safflower oil, sunflower oil and combinations thereof.

38. The method of Claim 30 wherein said tocopherol composition includes no more than about 20 weight percent alpha-tocopherols, when present, based on the total weight of tocopherols in said composition.